

10-1-2017

# An unknown reaction to pembrolizumab: giant cell arteritis.

Ida Micaily, MD

*Abington Jefferson Health*, [ida.micaily@jefferson.edu](mailto:ida.micaily@jefferson.edu)

Marc Chernoff, DO

*Abington Jefferson Health*, [marc.chernoff@jefferson.edu](mailto:marc.chernoff@jefferson.edu)

## Let us know how access to this document benefits you

Follow this and additional works at: <https://jdc.jefferson.edu/medfp> Part of the [Medicine and Health Sciences Commons](#)

### Recommended Citation

Micaily, MD, Ida and Chernoff, DO, Marc, "An unknown reaction to pembrolizumab: giant cell arteritis." (2017). *Department of Medicine Faculty Papers*. Paper 218.<https://jdc.jefferson.edu/medfp/218>

This Article is brought to you for free and open access by the Jefferson Digital Commons. The Jefferson Digital Commons is a service of Thomas Jefferson University's [Center for Teaching and Learning \(CTL\)](#). The Commons is a showcase for Jefferson books and journals, peer-reviewed scholarly publications, unique historical collections from the University archives, and teaching tools. The Jefferson Digital Commons allows researchers and interested readers anywhere in the world to learn about and keep up to date with Jefferson scholarship. This article has been accepted for inclusion in Department of Medicine Faculty Papers by an authorized administrator of the Jefferson Digital Commons. For more information, please contact: [JeffersonDigitalCommons@jefferson.edu](mailto:JeffersonDigitalCommons@jefferson.edu).

**As submitted to:**

***Annals of Oncology***

**And later published as:**

**An Unknown Reaction to Pembrolizumab: Giant Cell Arteritis**

**Volume 28, Issue 10, October 2017, pages: 2621-2622**

**DOI: 10.1093/annonc/mdx306**

I. Micaily<sup>1\*</sup>, M, Chernoff<sup>2</sup> Department of Medicine<sup>1</sup> and Abington Hematology/ Oncology Associates<sup>2</sup>, Abington Jefferson Health, Abington, Pennsylvania, USA (\*E-mail: [ida.micaily@jefferson.edu](mailto:ida.micaily@jefferson.edu))

Dear Editor,

An 88 year old female with a past medical history of a hypertension, atrial fibrillation, and stage IV non-small cell lung cancer (NSCLC) presented to the emergency department with sudden onset left eye blindness and abdominal pain. She was noted to have worsening anemia and heme-occult positive stools, however abdominal imaging did not indicate any acute pathology. Given her baseline poor functional status, the patient was not a candidate for aggressive interventions. One week prior to presentation, the patient had received a first dose of pembrolizumab, 200 mg intravenous infusion, which was to be administered once every 3 weeks. Upon consultation with an ophthalmologist, she was found to have biopsy confirmed giant cell arteritis (GCA). For her GCA, she was treated with high dose oral prednisone with close clinical monitoring. She endured a prolonged hospital course with constipation, anemia and atrial fibrillation with rapid ventricular rate. The patient was cardioverted twice, and her anemia was treated with two separate transfusion of packed red blood cells.

After discharge, the patient received another dose of 200 mg of IV pembrolizumab, on schedule. Subsequently, she returned to the emergency department five days later with worsening abdominal pain and three episodes of watery diarrhea. An infectious work up was negative, and a CT scan of her abdomen demonstrated focal areas of sigmoid colitis. It was believed that the pathology from both her GCA and colitis were induced by pembrolizumab.

Although colitis is a known and observed phenomena of immunologic therapy (1), GCA has yet to be associated with pembrolizumab. The patient was treated with high dose intravenous steroids. Unlike oral steroids, the patient stated that her eyesight subjectively improved with intravenous steroids. However, due to her poor functional status from prolonged hospitalizations, and concern for worsening gastrointestinal bleeding, the patient decided to switch to oral prednisone, in hope of a gradual taper.

Although the current standard of care for NSCLC with appropriate PDL-1 status are immunologics (2), the possibility of inducing autoimmune effects should be carefully considered in regards to a patient's

quality of life. The current literature correlates PD-1 to several classes of immune-related adverse effects (3, 4). However, GCA has not been attributed to pembrolizumab in the current literature.

References:

1. Postow MA. Managing immune checkpoint-blocking antibody side effects. *Am Soc Clin Oncol Educ Book*. 2015:76-83.
2. Nishijima TF, Shachar SS, Nyrop KA, Muss HB, Safety and Tolerability of PD-1/PDL1 Inhibitors Compared with Chemotherapy in Patients with Advanced Cancer: A Meta-Analysis. *Oncologist*. 2017 Apr;22(4):470-479.
3. Friedman CF, Proverbs-Singh TA, Postow MA. Treatment of the Immune-Related Adverse Effects of Immune Checkpoint Inhibitors: A Review. *JAMA Oncol*. 2016 Oct 1; 2(10):1346-1353
4. Spain L, Diem S, Larkin J, Management of toxicities of immune checkpoint inhibitors. *Cancer Treatment Reviews*. March 2016, 44: 51–60